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ABSTRACT BOOK

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OC 12. NEW OPPORTUNITIES BROUGHT ABOUT BY SUPPORTED IONIC LIQUIDS WITHIN THE REMOVAL OF ANTICANCER DRUGS FROM AQUEOUS SOLUTIONS

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With the cancer incidence growing worldwide, advances to provide enhanced therapies were undertaken by the medical field. As the consumption of anticancer drugs, namely cytostatics, increased, their occurrence and fate in the aquatic environment became a matter of high concern. In order to provide an adequate route to remove cytostatics from aqueous samples, supported ionic liquids (SILs) are here proposed. This is based on the advantages of solid supports and the number of new and tuneable materials that can arise from functionalizing and impregnating solid phases with ILs.

In this work, the synthesis and characterization of several ammonium-based SILs using silica as the support material was initially performed. Then, the potential of SILs as adsorbents for cytostatics was appraised by determining the adsorption kinetics and isotherms. The results show that the tuneable nature of SILs is the key to attain outstanding enhancements in the removal of cytostatics from aqueous samples.

Keywords: supported ionic liquids, adsorption, cytostatics.

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